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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/216,519	12/18/1998	DARREN KERR	112025-0112	9572

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EXAMINER

MEISLAHN, DOUGLAS J

ART UNIT PAPER NUMBER

2132

DATE MAILED: 06/04/2003

21

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/216,519

Applicant(s)

KERR ET AL.

Examiner

Douglas J. Meislahn

Art Unit

2132

①

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment filed 13 March 2003 that added claims 35-49 and amended claims 1, 10, 20, 21, 27, 33, and 34.

Response to Arguments

2. Applicant's arguments with respect to claims 1-49 have been considered but are moot in view of the new ground(s) of rejection.
3. Applicant's argument with respect to the 101 rejection of claim 34 is unpersuasive because, although useful, the signal in the claim is not tangible. Amending the claim so that it covers a computer network on which electromagnetic signals propagate would overcome this rejection. Alternatively, amending the claim so that the electromagnetic signals are on a carrier wave would also overcome the rejection, but support for the carrier wave would need to be in the specification.
4. In response to applicant's argument regarding claim 20 that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., selecting an ALU output) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Objections

5. Claims 33 and 34 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claims, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form. The claims do not limit the parent claims but rather change the statutory class. Applicant is advised to write the claims in independent form.

6. Claims 5, 20, 21, 27, 35, 40, 41, 44, 45, and 49 are objected to because of the following informalities: claims 20, 21, 27, 35, 40, 41, and 45 recite "OR" in the last or, in the case of claim 41, second to last line of the claim – capitalization is unnecessary, although if applicant meant that "OR" should be treated as logical or, then the claim should read as such; claim 21 needs a "to" after "responsive" in the fourth line of the claim; the first word in line five of claim 27 should be "processor" not "process"; claims 44 and 49 need an "a" after "providing" in their second lines; claim 5 needs an "a" after "is" in the first line; in claim 32, "initialing" should be "initializing"; the last word in the first line of claim 23 needs an "s" at its end; "comprise" in the first line of claim 28 also needs an "s". Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-19 and 21-49 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application

was filed, had possession of the claimed invention. The specification does not teach an ALU enabling or transferring processing to an encryption execution unit.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-9, 11-19 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 1 recites the limitation ""the result" in the second to last line of the claim. There is insufficient antecedent basis for this limitation in the claim. Change "the" to "a".

12. Claim 3 recites the limitation "the interface" in its first line. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 4 recites the limitation "the resources" in its first line. There is insufficient antecedent basis for this limitation in the claim.

14. Claims 9 and 26 recite the limitation "the DES function" as their last three words. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 11 recites the limitation "the integrated interface" in the first line, "the step of selectively accessing" spanning the second and third lines, and "the step of issuing" in the third line. There is insufficient antecedent basis for these limitations in the claim.

16. Claim 14 recites the limitation "the resources" in the first line of the claim. There is insufficient antecedent basis for this limitation in the claim.

17. Claim 18 recites the limitation "the plaintext" in the second line. There is insufficient antecedent basis for this limitation in the claim.

18. Claim 23 recites the limitation "the one of more internal registers" in the third line of the claim. There is insufficient antecedent basis for this limitation in the claim.

19. Claim 30 recites the limitation "the DES functional component" spanning the third and fourth lines and "the sub-key generation functional component" spanning the fifth and sixth lines. There is insufficient antecedent basis for these limitations in the claim.

20. Claim 31 recites the limitation "the sub-key generation functional component" in the third line. There is insufficient antecedent basis for this limitation in the claim.

21. Claim 32 recites the limitation "the DES operations" at the end of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

22. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 34 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Data structures must be tangibly embodied to be statutory.

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. Claims 1-19 and 21-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawe et al., in view of Chi et al., Johns-Vanos et al., Farrell et al., Narad et al., Schneier, and the Microsoft Press Computer Dictionary.

Given the ambiguities in the claims that resulted in the 112 rejections, a detailed analysis of the claims is infeasible. However, the examiner believes that, when claimed clearly, the previously cited prior art, Hawe et al., Chi et al., Johns-Vanos et al., Farrell et al., and Narad et al. would render the claims obvious. It is possible that the rejection would be clearer when fleshed out by a definition given by the Microsoft Press Computer Dictionary, specifically that for a multiplexer. Also, a discussion of DES, such as that given by Schneier in *Applied Cryptography* at pages 265-301, might show the ubiquitous nature of some claim features.

25. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell et al. in view of Chi et al., and Narad et al.

Farrell et al. show a TCSM at 103 in figure 10. Element 102 in the same figure is a multiplexer that selects either an (indirect) output of the TCSM or inputs from an outside source, which are sent from microcontroller. Farrell et al. do not say that the TCSM is for encryption, that a plurality of them are arranged in rows and columns between an input header buffer and an output header buffer, or that they are responsive to the microcontroller reading an opcode. Narad et al. teach TCSMs as encryptors in figures 1-3 as well as other sections already cited. Chi et al. teach controlling cryptographic processes with opcodes at lines 56-63 of column 4. Chi et al. also teach using arrays in lines 34-56 of column 11. Therefore it would have been obvious to a

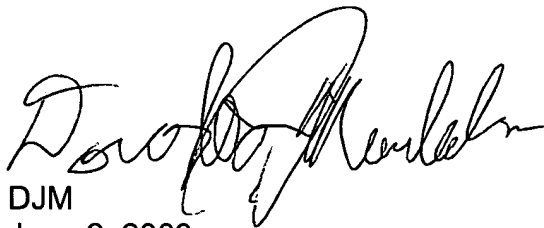
person of ordinary skill in the art at the time the invention was made to place the pipelined TCSM of Farrell et al. into an array to multiply its power as shown by Chi et al. and to use opcodes (also taught by Chi et al.) to direct it to perform encryption, a computationally-intensive procedure, as taught by Narad et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Meislahn whose telephone number is (703) 305-1338. The examiner can normally be reached on between 9 AM and 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barrón can be reached on (703) 305-1830. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


DJM
June 2, 2003

Douglas J. Meislahn
Examiner
Art Unit 2132